

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (*Currently Amended*) A method Method for marking data packets (~~DP~~) of a data transmission flow (~~TCPF~~) pertaining to an end-to-end connection to which an end-to-end transport protocol is associated within a packet network, said method comprising:including the steps of

[[ -]] for each subsequent one of said data packets (~~DP~~), generating a priority (~~P~~) based on at least one service quality parameter (~~BW,BT~~) attributed to said data transmission flow and based upon a network feedback parameter indicative of the state of congestion with said packet network, and

[[ -]] inserting said priority (~~P~~) within said each subsequent one of said data packets for further transmission to said packet data network, wherein

characterised in that

said priority (~~P~~) is further generated based upon a network feedback parameter (~~NFB~~) is extracted from a standard feedback packet of said end-to-end protocol indicative of the state of congestion within said packet network.

2. (*Currently Amended*) The method Method according to claim 1, wherein  
~~characterised in that~~  
said network feedback parameter (NFB) is related to the state of congestion on said end-  
to-end connection or with a routing device of said network.

3. (*Currently Amended*) The method Method according to claim 1, wherein said method  
further comprises determining the rate at which said priority is generated.  
~~characterised in that~~  
~~said network feedback parameter (NFB) is related to the state of congestion within a~~  
~~routing device of said network.~~

4. (*Currently Amended*) The method Method according to claim 1, wherein  
~~characterised in that~~  
said priority generation rate (P) is ~~further~~ generated from a reduction factor ~~at least one~~  
~~other parameter ( $\beta, \gamma$ )~~ attributed to said end-to-end connection and from said at least one other  
service quality parameter.

5. (*Currently Amended*) The method Method according to claim 4, wherein  
~~characterised in that~~  
said priority (P) has one of a predetermined set of priority values ~~(HI, LO).~~

6. (*Currently Amended*) The method ~~Method~~ according to claim 4[[5]], wherein  
~~characterised in that~~  
~~said at least one other parameter attributed to said end-to-end connection is a reduction~~  
~~factor ( $\gamma$ ) whereby the rate of generating a first type of priority having a first predetermined value~~  
~~( $\gamma$ ) of said set is decreased based on said reduction factor ( $\gamma$ ).~~

7. (*Currently Amended*) The method ~~Method~~ according to claim 19[[6]], wherein  
~~characterised in that~~  
~~said at least one other parameter attributed to said end-to-end connection is an increase~~  
~~factor ( $\beta$ ), whereby the rate of generating said first type of priority is increased based on said~~  
~~increase factor ( $\beta$ ).~~

8. (*Currently Amended*) The method ~~Method~~ according to claim 1, wherein  
~~characterized in that~~  
~~said at least one service quality parameter comprises consists of at least one of an agreed~~  
~~bandwidth value ( $BW$ ) and an agreed burst tolerance value ( $BT$ ).~~

9. (*Currently Amended*) A marker device that generates ~~Marker device (MD)~~ adapted to generate a priority (P) and inserts to insert said priority (P) within a data packet (~~DP~~) of a data transmission flow (TCPPF) pertaining to an end-to-end connection to which an end-to-end protocol is associated within a packet network, said marker device generating (MD) being adapted to generate said priority (P) based on at least one service quality parameter (~~BW,BT~~) attributed to said data transmission flow (TCPPF) and on a network feedback parameter indicative of the state of congestion within said packet network, said marker device comprising:

a congestion check device that receives packets comprising said network feedback parameter, wherein said congestion check device receives standard feedback packets of said end-to-end transport protocol and extracts said network feedback parameter therefrom;

a priority device coupled to said congestion check device, wherein said priority device generates said priority; and  
an inserting device coupled to said priority device, wherein said inserting device inserts said priority into said data packet.

characterized in that

~~said marker device (MD) is further adapted to generate said priority (P) from a network feedback parameter (NFB) indicative of the state of congestion within said packet network.~~

10. (*Cancelled*).

11. (*Currently Amended*) The marker ~~Marker~~ device (MD) according to claim 9, further comprising a token generation rate device, wherein, upon receipt of a trigger signal from said congestion check device, said token generation rate device determines a rate with which said priority is generated within said priority device and inputs said rate to said priority device.

~~characterised in that~~

~~said network feedback parameter (NFB) is related to the state of congestion within a routing device of said network.~~

12. (*Currently Amended*) The marker ~~Marker~~ device (MD) according to claim 11[[9]], wherein said token generation rate device generates

~~characterised in that~~

~~said marker device (MD) is further adapted to generate said priority rate (P) from a reduction factor at least one other parameter ( $\beta, \gamma$ ) attributed to said end-to-end connection and from said at least one service quality parameter.~~

13. (*Currently Amended*) The marker ~~Marker~~ device (MD) according to claim 10[[12]], wherein

~~characterised in that~~

~~said priority device generates marker device (MD) is further adapted to generate said priority (P) so as to have one of a predetermined set of priority values (H, L, O).~~

14. (*Currently Amended*) The marker ~~Marker device (MD)~~ according to claim 13,  
wherein  
~~characterised in that~~  
said token rate generation device decreases at least one other parameter attributed to said  
~~end to end connection is a reduction factor ( $\gamma$ ) whereby said marker device (MD) is further~~  
~~adapted to decrease the rate of generating a first type of priority having a first predetermined~~  
~~value (HI) of said set, based on said reduction factor ( $\gamma$ ).~~

15. (*Currently Amended*) The marker ~~Marker device (MD)~~ according to claim 21[[13]],  
wherein  
~~characterised in that~~  
said token generation rate device increases at least one other parameter attributed to said  
~~end to end connection is an increase factor ( $\beta$ ), whereby said marker device (MD) is further~~  
~~adapted to increase the rate of generating said first type of priority, based on said increase factor~~  
~~( $\beta$ ).~~

16. (*Currently Amended*) The marker ~~Marker device~~ according to claim 9, wherein  
~~characterized in that~~  
said at least one service quality parameter comprises of at least one of ~~consists of an~~  
~~agreed bandwidth value (BW) and an agreed burst tolerance value (BT).~~

17. (*Currently Amended*) A terminal ~~Terminal~~ coupled to a packet network and adapted to transmit data packets of a data transmission flow (TCPF) pertaining to an end-to-end connection within said packet network to at least one other terminal coupled to said packet network, said terminal comprising a marker device according to claim 9 ~~including a marker device (MD) adapted to generate a priority (P) and to insert said priority within a data packet (DP) of said data transmission flow (TCPF), said priority (P) being generated based on at least one service quality parameter (BW,BT) of said end-to-end connection in said packet network~~ characterised in that said marker device (MD) is further adapted in accordance to claim 9.

18. (*Currently Amended*) An access ~~Aceess~~ router apparatus of a packet network, said access router apparatus receiving ~~being adapted to receive~~ data packets from a terminal coupled to said access router, said data packets pertaining to an end-to-end connection within said packet network between said terminal and another terminal coupled to said packet network, wherein said access router apparatus comprises a marker device according to claim 9 ~~including a marker device (MD) adapted to generate a priority (P) and to insert said priority within a data packet (DP) of a data transmission flow (TCPF) pertaining to said end to end connection, said priority (P) being generated based on at least one service quality parameter (BW,BT) of said end to end connection in said packet network~~ characterised in that said marker device (MD) is further adapted in accordance to claim 9.

19. *(New)* The method according to claim 1, wherein said priority generation rate is generated from an increase factor attributed to said end-to-end connection and from said at least one other service quality parameter.

20. *(New)* The marker device according to claim 11, wherein said inserting device receives said data transmission flow and extracts, from said data packets of said data transmission flow, data packet parameters to forward to said priority device, which generates said priority from said extracted data packet parameters.

21. *(New)* The marker device according to claim 11, wherein said token generation rate device generates said priority rate from an increase factor attributed to said end-to-end connection and from said at least one service quality parameter.